

Department of Natural Resources & Environmental Control
Administrative Policies and Provisions

Subject: D-1306 – Sea Level Rise Adaptation

Section: D-1300 – Resources Programs Management

Issued: 1/27/2010

Revised:

Page: 1 of 2

Procedure:

Background

Delaware experiences inundation from the sea on a regular basis. Coastal Storms routinely cause flooding through the effects of storm surge and heavy rainfall. The resulting inundation causes significant social and economic impacts in the short-term. Future inundation impacts will be further exacerbated by local changes in sea level.

Documented data has shown that Sea level has increased in Delaware by more than one foot over the past century. The conclusion of the Intergovernmental Panel of Climate Change is that the rate of sea level rise will increase over the next century. While evidence has shown that the sea level has changed dramatically over the course of time, the coastline can no longer adapt naturally as it has in the past due to human development and alterations of the landscape.

Sea level rise will cause increased inundation and shoreline erosion; increased tidal surge, flooding from severe weather events; accelerate saltwater contamination of ground water and surface water supplies, elevate water tables, and expedite loss of critical habitats.

Development in Delaware's coastal zone that does not account for increasing inundation levels puts homes, businesses and infrastructure at risk resulting in human hardship and higher cost to government for response and recovery. Additionally, marshes and other critical low-lying habitats may also be at risk due to the inability to naturally migrate landward with rising sea levels. A policy that addresses the effects of inundation by adapting to sea level rise will make Delaware more resilient to short-term storm events and long term sea level rise.

Policy

It is the position of the Department of Natural Resources & Environmental Control (DNREC) that sea level rise is currently occurring and will continue to occur at an accelerated rate due to global climate change. Further, it is the policy of DNREC to proactively consider and plan for the potential effects of coastal inundation department-wide using projections based on the best available science.

As such:

1. All DNREC staff when representing the Department shall communicate the Department's policy internally and externally.
 2. All DNREC programs shall consider the potential effect of coastal inundation in project planning, engineering, design, and review, as well as land acquisition, management, and restoration.
 3. All DNREC programs shall conduct a vulnerability assessment for all DNREC holdings and assets to identify risks from inundation and develop plans to increase resiliency and adaptability. The process and timing of these actions will be determined by DNREC and developed within 12 to 18 months of the signing of this policy.
 4. All DNREC programs shall consider project alternatives that avoid siting buildings and infrastructure within areas that are vulnerable to inundation. If avoidance is not practicable, project design must address the consequences of inundation.
1. All DNREC programs shall use the following range of sea level rise scenarios, appropriate to the project's longevity and nature. Projects of a longer expected life or more critical nature should practice precautionary principles and use a more protective sea level rise scenario.

As of February 1, 2010; the following scenario(s)* shall be used:

0.5 meters by 2100 for low sensitivity projects
1.0 meters by 2100 for medium sensitivity projects
1.5 meters by 2100 for high sensitivity projects

*These values shall be adjusted as the IPCC and other peer reviewed publications produce updated projections and modeling techniques.



Secretary, Department of Natural Resources and
Environmental Control

Date 1/27/10